Appendix F

```
' ***** LCD PANEL *****
' PIC16F819

'* SET UP BASIC ENVIRONMENT
         DEFINE CHAR_PACING 1000

' PORTA.0 = CURRENT SENSE
' PORTA.1 = POT
' PORTA.2 = THERMISTOR
' PORTA.3 = VOLTAGE SENSE
' PORTA.4 =
' PORTA.5 =


' PORTB.0 =
' PORTB.1 =
' PORTB.2 = NPN
' PORTB.3 = FORMERLY NPN
' PORTB.4 = PNP
' PORTB.5 =
' PORTB.6 =
' PORTB.7 =

'*************************************************************
'*                                                          *
'*                        ENVIRONMENT                       *
'*                                                          *
'*************************************************************


         DEFINE CHAR_PACING 1000

'*************************************************************
'*                                                          *
'*                        VARIABLES                         *
'*                                                          *
'*************************************************************

N        VAR       BYTE
X        VAR       BYTE
Y        VAR       BYTE
Z        VAR       BYTE

X2       VAR       WORD
Y2       VAR       WORD

MISCF    VAR       BYTE      BANK0

LCNT     VAR       BYTE
VOLTS    VAR       WORD
VOUT     VAR       WORD
CURRENT  VAR       WORD
AMP      VAR       WORD
TEMP     VAR       WORD
IOFFSET  VAR       WORD

POTAVG   VAR       WORD
L20      VAR       WORD
PCNT     VAR       BYTE
LCURRENT VAR       WORD

BCNT     VAR       BYTE

VIDLE    VAR       WORD
VMAX     VAR       WORD

POTBUF   VAR       WORD(16)
ACNT     VAR       BYTE
CCNT     VAR       BYTE

ALOOP    VAR       BYTE
ELOOP    VAR       BYTE
```